



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – CHEMISTRY

SECOND SEMESTER – APRIL 2016

CH 2955 – BIO-ORGANIC CHEMISTRY

Date: 27-04-2016

Dept. No.

Max. : 100 Marks

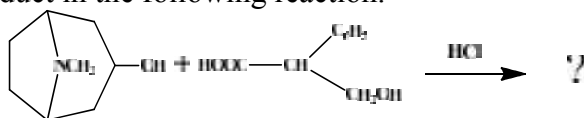
Time: 01:00-04:00

PART-A

Answer ALL questions.

(10 x 2= 20 marks)

1. What are anomers?
2. How are aminosugars synthesized?
3. Mention the protecting strategy in peptide synthesis.
4. How is the determination of C- and N-terminal amino acid sequences done?
5. How is Kuhn-Roth method useful in identifying the presence of isopropylidene and isopropenyl group in terpenoid molecules?
6. Identify the product in the following reaction.



7. Draw the structure of Cortisone.
8. State Mill's Rule.
9. How will you differentiate flavones from flavanones?
10. How is electronic spectroscopy useful in predicting the position of sugar residues in anthocyanins?

PART-B

Answer any EIGHT questions.

(8 x 5= 40 marks)

11. Discuss the important synthetic applications of pectin and starch.
12. How D-glucose could be converted into D-mannose?
13. Mention the important relationship between respiration and glycolysis.
14. Describe Watson-Crick model of DNA molecule.
15. Explain the catabolism of aminoacid in urea cycle.
16. Discuss the tertiary structure of protein.
17. Discuss the importance of synthetic methods in determining the structure of terpenoids.
18. Explain the structural elucidation of cadinene.
19. Write a note on the conformation of steroids.
20. Explain the synthesis of Oestrone and its functions.
21. How will you ascertain the position of glucose in cyanin chloride?
22. Elucidate the structure of Hirsutidine chloride.

PART-C

Answer any FOUR questions.

(4 x 10= 40 marks)

- 23 a. Explain the various steps involved in the Krebs's tricaboxylic acid cycle. (8)
b. Why do glucose and mannose form the same osazone? (2)
24. Write a note on the genetic code and biosynthesis of proteins.
- 25 a. Explain the relationship between mutarotation and reducing property of carbohydrates.
b. How do transamination and deamination of aminoacid take place? (5+5)
- 26 a. Explain the structural elucidation of abietic acid. (6)
b. Discuss the importance of Von-Braun and Emde's method in determining the structure of alkaloids. (4)
27. Outline the synthesis of cholesterol from 2-methoxy-p-cresol based on Woodward sequence:
C → CD → BCD → ABCD.
28. Elucidate the structure of Cyanidin chloride.
